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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

EVANISKO, GEORGE ROBERT

ART UNIT PAPER NUMBER

3762

DATE MAILED: 03/01/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/828,460

Applicant(s)

MASS ET AL.

Examiner

George R Evanisko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>14</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not provide proper antecedent basis for the receiver receiving the carrier signal “in a manner which does not depend upon the transmitter being loaded by the antenna of the implantable device.”

Claim Rejections - 35 USC § 112

Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The subject matter which was not originally described in the specification is the receiver receiving the carrier signal “in a manner which does not depend upon the transmitter being loaded by the antenna of the implantable device”, in combination with the other elements in the claim. The original specification does not have any negative limitation directed to the transmitter not being loaded by the antenna of the implantable device when the receiver is receiving the carrier signal. In addition, the transmitter will be loaded since there will be a generation of electromotive force in the transmitter due to the varying magnetic flux reflected by the implanted antenna. Although the loading may be minute, it still is a loading of the transmitter. In addition, it is not “inherent” that the transmitter will not be loaded since the actual physical components used in the transmitter are not described in the specification and/or it

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can not be determined if the transmitter will or will not be loaded from the specification. (Any negative limitation or exclusionary proviso must have basis in the original disclosure. The mere absence of a positive recitation is not basis for an exclusion. Any claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. MPEP 2173.05(i)) Finally, the prior art does show external transmitters being "loaded" and therefore provides possibilities, and proves inherency is not required, that transmitters can be loaded. This rejection is related to new matter.

Claims 1-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The subject matter which was not originally described in the specification is the receiver receiving the carrier signal "in a manner which does not depend upon the transmitter being loaded by the antenna of the implantable device", in combination with the other elements in the claim. The specification does not contain any limitation to not loading the transmitter of the external device. In addition, the transmitter will be loaded since there will be a generation of electromotive force in the transmitter due to the varying magnetic flux reflected by the implanted antenna. Although the loading may be minute, it still is a loading of the transmitter. In addition, it is not "inherent" that the transmitter will not be loaded since the actual physical components used in the transmitter are not described in the specification and/or it can not be determined if the transmitter will or will not be loaded from the specification. Finally, the prior art does show external transmitters being

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“loaded” and therefore provides possibilities, and proves inherency is not required, that transmitters can be loaded. This rejection is related to enablement.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Guern et al (5260701). Guern meets the limitation of the receiver, 4, receiving the reflected signal in a manner which does not depend upon the transmitter, 1-3, being loaded by the antenna of the implantable device. Although Guern’s external antenna, AE, is loaded, his transmitter is not loaded. In addition, Guern is capable of meeting the functional use recitations presented in the claims.

Claims 1-5, 9, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Slocum et al (4494545). Slocum meets the limitation of the receiver receiving the reflected signal in a manner which does not depend upon the transmitter, 84 and 86, being loaded by the antenna of the implantable device. In addition, Slocum is capable of meeting the functional use recitations presented in the claims.

Claims 1, 2, 16, and 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Baldwin et al (4075632).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6-15, 20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guern et al (or Slocum et al). Guern (or Slocum) shows the use of a reference signal in figures 10 and 11 (figure 12) for receiver 4 but does not call the receiver a synchronous demodulator and symbol decoder. Guern (or Slocum) discloses the claimed invention except for the transmission using binary or quadrature phase shift keying or differential binary or quadrature phase shift keying (claims 7, 8, 12, 14, 15, and 22), the varactor diode (claim 6), a symbol decoder and synchronous demodulator correlating a reference signal from the external device with the symbol delayed reflected signal (claims 9-11, 13, 20, and 23). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the bi-directional phase telemetry system as taught by Guern (or Slocum), with the transmission using binary or quadrature phase shift keying or differential binary or quadrature phase shift keying (claims 7, 8, 12, 14, 15, and 22), the varactor diode, and a symbol decoder and synchronous demodulator correlating a reference signal from the external device with the symbol delayed reflected signal (claims 9-11, 13, 20, and 23) since it was known in the art that phase telemetry systems use: the transmission using binary or quadrature phase shift keying or

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differential binary or quadrature phase shift keying (claims 7, 8, 12, 14, 15, and 22) to provide phase based telemetry using conventional, easy to implement telemetry protocols; a varactor diode to shift the phase of the reflected signal; and a symbol decoder and synchronous demodulator correlating a reference signal from the external device with the symbol delayed reflected signal (claims 9-11, 13, 20, and 23) to provide a receiver that can demodulate and interpret the data based on the proper phase.

In addition, it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the phase telemetry system of Guern (or Slocum) with the varactor diode, because Applicant has not disclosed that the varactor diode provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with modifying the imaginary or real part of the impedance as taught by Guern (or Slocum), because it provides an easy to implement means to vary the phase of the reflected signal.

Therefore, it would have been an obvious matter of design choice to modify Guern (or Slocum) to obtain the invention as specified in the claim(s).

Claims 3-15, 18-20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baldwin et al. Baldwin discloses the claimed invention except for the receiver receiving digital data with the carrier (claim 3), voltage level symbols used to adjust the impedance of a tank circuit with a voltage controlled impedance (claims 4, 5, 18, and 19), transmission using binary or quadrature phase shift keying or differential binary or quadrature phase shift keying (claims 7, 8, 12, 14, 15, and 22), the varactor diode (claim 6), a symbol decoder and synchronous

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demodulator correlating a reference signal from the external device with the symbol delayed reflected signal (claims 9-11, 13, 20, and 23). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the bi-directional phase telemetry system as taught by Baldwin, with the receiver receiving digital data with the carrier (claim 3), voltage level symbols used to adjust the impedance of a tank circuit with a voltage controlled impedance (claims 4, 5, 18, and 19), the transmission using binary or quadrature phase shift keying or differential binary or quadrature phase shift keying (claims 7, 8, 12, 14, 15, and 22), the varactor diode, and a symbol decoder and synchronous demodulator correlating a reference signal from the external device with the symbol delayed reflected signal (claims 9-11, 13, 20, and 23) since it was known in the art that phase telemetry systems use: the receiver receiving digital data with the carrier (claim 3) to provide digital data to control a digital implanted system; voltage level symbols used to adjust the impedance of a tank circuit with a voltage controlled impedance (claims 4, 5, 18, and 19) to provide a simple, standard system to encode data on the reflected carrier; the transmission using binary or quadrature phase shift keying or differential binary or quadrature phase shift keying (claims 7, 8, 12, 14, 15, and 22) to provide phase based telemetry using conventional, easy to implement telemetry protocols; a varactor diode to shift the phase of the reflected signal; and a symbol decoder and synchronous demodulator correlating a reference signal from the external device with the symbol delayed reflected signal (claims 9-11, 13, 20, and 23) to provide a receiver that can demodulate and interpret the data based on the proper phase.

In addition, it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the phase telemetry system of Baldwin with the varactor diode,

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because Applicant has not disclosed that the varactor diode provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with varying a reactance as taught by Baldwin, because it provides an easy to implement means to vary the phase of the reflected signal.

Therefore, it would have been an obvious matter of design choice to modify Baldwin to obtain the invention as specified in the claim(s).

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment. The previous cited art of US patents 5466246, 4681111, 5517194, 6108367, 6236889, 6301504, 6201993, 5999857, and 4565980 are several examples of many that show the different items that are well known in the art. All the patents show the different forms of phase telemetry and/or with symbol encoders and synchronous demodulators. In addition, 4565980 shows the use of a varactor diode.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after


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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R Evanisko whose telephone number is 703 308-2612. The examiner can normally be reached on M-F 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 703 308-5181. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


George R Evanisko
Primary Examiner
Art Unit 3762

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GRE
February 19, 2004